U.S. Department of Transportation

Research and Special Programs Administration

400 Seventh Street, S.W.
Washington, D.C. 20590

IAEA CERTIFICATE OF COMPETENT AUTHORITY
SPECIAL FORM RADIOACTIVE MATERIALS
CERTIFICATE NUMBER USA/0158/S, REVISION 5

This certifies that the source described has been demonstrated to meet the regulatory requirements for special form radioactive material as prescribed in the regulations of the International Atomic Energy Agency[1] and United States of America[2] for the transport of radioactive materials.

1. Source Identification - E.I DuPont/New England Nuclear Model NER-479C.

2. Source Description - Cylindrical single encapsulation made of Type 316L stainless steel and sealed using heli-arc welding. Approximate outer dimensions range from 15.0 mm (0.6 in.) to 38.0 mm (1.5 in.) in diameter and 6.0 mm (0.2 in.) to 13.0 mm (0.5 in.) in length. The active face has a wall thickness of approximately 0.25 mm (0.01 in.). Construction shall be in accordance with attached NEN Drawing No. 313-306.

3. Radioactive Contents - No more than the 74.0 GBq (2.0 Ci) of Americium-241 as a ceramic.

4. Quality Assurance - Records of Quality Assurance activities required by paragraph 310 of the IAEA regulations[1] shall be maintained and made available to the authorized officials for at least three years after the last shipment authorized by this certificate. Consignors and consignees in the United States exporting or importing shipments under this certificate shall satisfy the requirements of Subpart H of 10 CFR 71.

5. Special Conditions -

   a. This certificate is only valid for disposal of sources, including transport of sources to locations pending disposal.

   b. This certificate is only vaild for surface transport (rail or highway), unless transported in an approved Type B package.

6. Expiration Date - This certificate expires on June 30, 2004.

This certificate is issued in accordance with paragraph 804 of the IAEA Regulations and Section 173.476 of Title 49 of the Code of Federal Regulations, in response to the petition and information dated March 17, 2004 submitted by R.M. Wester & Associates, Inc, St. Peters, MO, and in consideration of other information on file in this Office.

Certified by:

Robert A. McGuire
Associate Administrator for
Hazardous Materials Safety

MAR 19 2004
(DATE)

Revision 5 - Issued to authorize disposal of sources.

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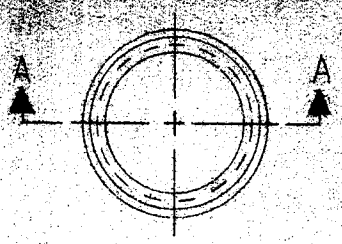
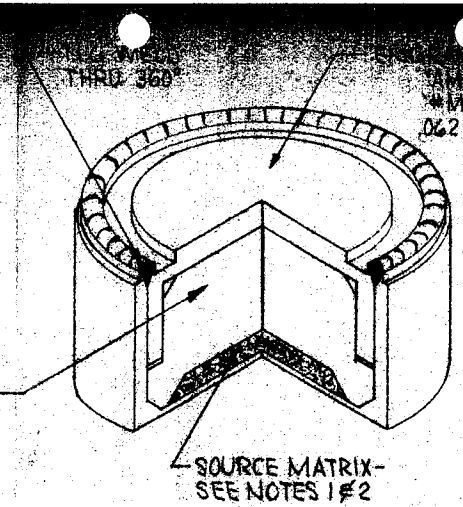
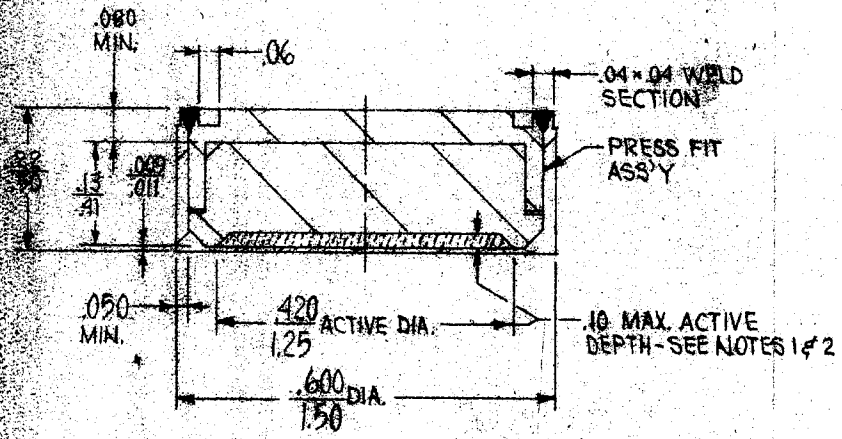
[1] "Regulations for the Safe Transport of Radioactive Material, 1996 Edition (Revised), No. TS-R-1 (ST-1, Revised)," published by the International Atomic Energy Agency (IAEA), Vienna, Austria.

[2] Title 49, Code of Federal Regulations, Parts 100 - 199, United States of America.







SECTION A-A

NOTES

1. SOURCE MATRIX CONSISTS OF AM-241 AS A VITREOUS CERAMIC FUSED TO THE INSERT FORMING A CERAMIC GLAZE.
2. MAXIMUM ACTIVITY CONTENT SHALL BE 2000 MCI. MAXIMUM ACTIVITY CONCENTRATION SHALL BE 1.25 CI/CM² ACTIVE AREA. ACTIVE DIA.: ACTIVE HGT. RATIO TO BE 5:1 MIN.
3. INSERT, TO WHICH THE SOURCE MATRIX IS FUSED, SHALL BE CRES 316L STN. STL. OR AN ALUMINO-SILICATE MACHINABLE CERAMIC (MELTING POINT ~1200°C AFTER FIRING AND SUBSEQUENT COOLING).
4. LEAK TEST PER ANSI N542-1977 PROCEDURES A2.1.1 SMEAR TEST, A2.1.3 IMMERSION TEST, AND A2.2.1 BUBBLE TEST. SEE NSQA TEST DIRECTIVE 603. LIMIT 1×10⁻⁶ [illegible]
5. ANSI N542-1977 PERFORMANCE CLASSIFICATION C64444.
6. D.O.T. 'SPECIAL FORM' MATERIAL PER 10CFR71.4.

NEN CONTROL SPECIFICATION

MATERIAL SPECIFICATIONS: CRES 316L STN. STL.	FRACTIONAL: ± 1/64	DECIMAL: ± .XX=.06 .XXX=.005	ANGULAR: ± 30'	NEW ENGLAND NUCLEAR CORP. BOSTON, MASS.
DRAWN: J. SOMARES	REV.	DATE: 9-11-78	SCALE: N.T.S.	NAME: NER-479C AM-241 L.E. PHOTON SOURCE
		DO NOT SCALE DRAWING		DRAWING NO. 313-80